

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A soldering workpiece, comprising:
a soldering workpiece made from aluminum and/or aluminum compounds, [[and]]
an oxide and/or hydroxide layer arranged at a surface of the soldering workpiece, and
a solder layer comprising an aluminum compound, wherein the solder layer is directly
applied to the oxide and/or hydroxide layer,
wherein a thickness d of the oxide and/or hydroxide layer is greater than 25 nm when
the oxide and/or hydroxide layer is formed[[,]]
~~wherein the soldering workpiece is configured to be soldered so that solder is directly~~
~~applied to the oxide and/or hydroxide layer.~~
2. (Previously Presented) The soldering workpiece as claimed in claim 1, wherein $25\text{ nm} < d < 1000\text{ nm}$.
3. (Previously Presented) The soldering workpiece as claimed in claim 1, wherein the oxide and/or hydroxide layer includes hydroxide and comprises predominantly of boehmite.
4. (Previously Presented) The soldering workpiece as claimed in claim 1, wherein the oxide and/or hydroxide layer includes inhomogeneities.
5. (Previously Presented) The soldering workpiece as claimed in claim 4, wherein the homogeneities are introduced into the oxide and/or hydroxide layer by chemical and/or thermal and/or mechanical treatment of the soldering workpiece.
6. (Previously Presented) The soldering workpiece as claimed in claim 1, further comprising a halogen-containing lubricant.
7. (Previously Presented) The soldering workpiece as claimed in claim 6, wherein the lubricant includes additives or constituents comprising carboxylic acids, amines, sulfur compounds and/or phosphorus compounds.

8. (Canceled)

9. (Previously Presented) The soldering workpiece as claimed in claim 1, wherein a base material of the soldering workpiece has a magnesium content of greater than 0.2%.

10. (Previously Presented) A soldering process for joining at least two workpieces to one another, comprising:

joining at least two workpieces, wherein at least one workpiece is a workpiece as described in claim 1.

11. (Previously Presented) A soldering process, in particular the soldering process as claimed in claim 10, further comprising at least one machining process that is carried out on at least one workpiece prior to the joining step, wherein a halogen-containing lubricant is applied to the workpiece during the machining processes.

12. (Previously Presented) The soldering process as claimed in claim 11, wherein the lubricant includes additives or constituents comprising carboxylic acids, amines, sulfur compounds and/or phosphorus compounds.

13. (Previously Presented) The soldering process as claimed in claim 10, wherein thermal degreasing and the joining operation are carried out together during a single heating operation.

14. (Currently Amended) The soldering process as claimed in claim 10 [[1]], wherein a shielding gas is used for heating and/or soldering during the joining step.

15. (Previously Presented) A heat exchanger, comprising a heat exchanger that is at least partially soldered using the process as claimed in claim 10.

16. (Previously Presented) The soldering workpiece as claimed in claim 2, wherein $50 \text{ nm} < d < 500 \text{ nm}$.

17. (Previously Presented) The soldering workpiece as claimed in claim 16, wherein $80 \text{ nm} < d < 250 \text{ nm}$.

18. (Previously Presented) The soldering workpiece as claimed in claim 4, wherein the inhomogeneities comprise notches, pores and/or cracks.
19. (Previously Presented) The soldering workpiece as claimed in claim 9, wherein the magnesium content is greater than 0.2% and less than 2%.
20. (Previously Presented) The soldering process as claimed in claim 11, wherein the at least one machining process comprises a deep-drawing, cutting and/or punching process.
21. (Currently Amended) The soldering process as claimed in claim 14 [[10]], wherein the shielding gas comprises hydrogen, argon or nitrogen.
22. (Currently Amended) A soldering process for joining at least two workpieces to one another, comprising:
- providing a soldering workpiece made from aluminum and/or aluminum compounds, increasing a thickness of ~~growing~~ an oxide and/or hydroxide layer arranged at a surface of the soldering workpiece to a thickness sufficient to provide contact between a soldering compound and the soldering workpiece underneath the oxide and/or hydroxide layer during a subsequent soldering process,
 - introducing inhomogeneities into the oxide and/or hydroxide layer, and
 - soldering the soldering workpiece to another workpiece.
23. (Previously Presented) The soldering process as claimed in claim 22, wherein the thickness of the oxide and/or hydroxide layer is greater than 25 nm.
24. (Previously Presented) The soldering process as claimed in claim 22, wherein the oxide and/or hydroxide layer separates into fragments that detach from the soldering workpiece during the soldering step.
25. (Previously Presented) The soldering process as claimed in claim 22, wherein the inhomogeneities are introduced by a halogen-containing lubricant.
26. (Currently Amended) A soldering workpiece, comprising:
- a soldering workpiece made from aluminum and/or aluminum compounds, [[and]]

an oxide and/or hydroxide layer grown at a surface of the soldering workpiece to a thickness sufficient to provide contact between a soldering compound and the soldering workpiece underneath the oxide and/or hydroxide layer during a subsequent soldering process,

a solder layer comprising an aluminum compound, wherein the solder layer is directly applied to the oxide and/or hydroxide layer,

wherein the oxide and/or hydroxide layer includes inhomogeneities introduced into the oxide and/or hydroxide layer.

27. (New) The soldering process as claimed in claim 23, wherein $25 \text{ nm} < d < 1000 \text{ nm}$.

28. (New) The soldering process as claimed in claim 22, wherein the inhomogeneities comprise notches, pores and/or cracks.

29. (New) The soldering workpiece as claimed in claim 26, wherein a thickness d of the oxide and/or hydroxide layer is $25 \text{ nm} < d < 1000 \text{ nm}$.